

Specimens will be placed in the Farlow Herbarium and the National Herbarium.—R. E. SCHUH, Brooklin, Maine.

SOME FORMS OF GRASSES¹

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BROMUS LATIGLUMIS (Scribn.) Hitchc., forma **incanus** (Shear), comb. nov. *B. purgans incanus* Shear, U. S. Dept. Agric. Div. Agrost. Bull. xxiii. 41 (1900). *B. incanus* (Shear) Hitchc. RHODORA, viii. 212 (1906). *B. altissimus*, forma *incanus* (Shear) Wiegand, RHODORA, xxiv. 91 (1922). *B. ciliatus*, var. *incanus* (Shear) Farwell, Am. Midl. Nat. x. 204 (1927).

This is certainly only a pilose-sheathed form of the ordinarily glabrous-sheathed plant. The strongly costate, prolonged and closed sheaths with chartaceous and auricled flanges are characteristic of the species and at once separate it from *B. purgans* L. and *B. ciliatus* L., both of which have V-shaped orifices to the flangeless sheaths. As Shear correctly stated in the original publication, it "is very near *B. purgans latiglumis*, differing from it in having the sheaths densely soft pilose-pubescent." Glabrous-sheathed and pilose-sheathed forms occur in nearly all our species of *Bromus*; but unless they have other characters and distinctive ranges they should not be treated as species.

The name *B. latiglumis* (Scribn.) Hitchc. (1906) is here taken up in place of *B. altissimus* Pursh (1814), not Gilib. (1792).

BROMUS INERMIS Leyss., forma **villosus** (Mert. & Koch), comb. nov. *Festuca inermis*, β . *villosa* Mert. & Koch, Deutschl. Fl. i. 675 (1823).

B. INERMIS, forma **aristatus** (Schur), comb. nov. *B. inermis*, var. *aristatus* Schur, Enum. Pl. Trans. 805 (1885).

BROMUS MOLLIS L., forma **leiostachys** (Hartm.) comb. nov. *B. mollis*, β . *leiostachys* Hartm. Handb. Skand. Fl. ed. 2: 33 (1832).

This is the form of *Bromus mollis* with smooth spikelets, which has passed in America as *B. hordeaceus* L., var. *leptostachys* (Pers.) Beck or *B. hordeaceus*, f. *leptostachys* (Pers.) Wiegand, RHODORA, xxiv. 90 (1922). It has also been called *B. mollis*, f. *leptostachys* (Pers.) Neuman, Sv. Fl. 740 (1901).

Two errors are involved in the names cited in the preceding paragraph. In the first place, Holmberg, Bot. Notis. (1924) 325, shows with some conclusiveness that we have been wrong in uniting *B.*

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mollis L. and *B. hordeaceus* L.; the latter is a very different matted or prostrate plant of the coasts from southern Scandinavia to England and France; *B. mollis* being the widespread weed. In the second place, *B. mollis* β . *leptostachys* Pers. (1805) does not belong with *B. mollis*, but is referred without question by Rouy and by Holmberg to the synonymy of *B. commutatus* Schrad. Although the plant intended by Beck von Mannagetta by his *B. hordeaceus*, var. *leptostachys* may be the smooth form of *B. mollis*, the name rests eventually for its typification upon the plant of Persoon, which is identified as *B. commutatus*. Incidentally, *B. commutatus* Schrad. (1806) is antedated by *B. pratensis* Ehrh. in Hoffm. *Deutschl. Fl.* ed. 2, ii. 52 (1800). Ehrhart's name, originally published by him in 1791 as a *nomen nudum*, was validated by its proper description by Hoffmann.

B. mollis, f. *leiostachys* is well displayed in Amer. Gr. Nat. Herb. no. 891, collected by Professor Hitchcock and distributed as *B. racemosus* L.

AGROSTIS STOLONIFERA L., forma **aristigera**, f. nov., lemmatibus aristigeris.—Rarely in the range of the common awnless form. TYPE: along brook in meadow, Granville, Massachusetts, June 27, 1914, F. C. Seymour (in Gray Herb.).

Agrostis stolonifera is now generally accepted as the proper name for the Redtop, which has long passed as *A. alba* L. Unfortunately, the latter was based by Linnaeus upon the 1-flowered form of *Poa nemoralis* L. *A. stolonifera* as originally published in L. Sp. Pl. i. 62 (1753) was a mixed species, consisting in part of *A. verticillata* Vill., in part of Redtop; but most recent botanists are now agreed in restricting the name to the latter species, the element in the complex occurring in the region familiar to Linnaeus.

AGROSTIS PERENNANS (Walt.) Tuckerm., forma **chaetophora**, f. nov. Lemmatibus aristigeris.—TYPE: Huntingdon Co., Pennsylvania, August, 1865 J. R. Lowrie (in Gray Herb.).

AGROSTIS PERENNANS, var. AESTIVALIS Vasey, forma **atherophora**, f. nov. Lemmatibus aristigeris.—TYPE: island in Lac Tremblant, Co. Terrebonne, Quebec, August 1, 1922, J. R. Churchill (in Gray Herb.).

The types of both the above forms of *Agrostis perennans* were distributed as *A. canina* L. This misidentification arose, unquestionably, through the very unsatisfactory keys in American manuals, which rely upon the presence or absence of an awn as a fundamental specific character. In view of the fact that in northeastern America the commonly awnless *A. stolonifera* L., *A. tenuis* L., *A. scabra* L.,

A. scabra var. *septentrionalis* Fern. and *A. elata* (Pursh) Trin. all have awned forms and that the commonly awned *A. geminata* Trin., *A. canina* L. and *A. borealis* Hartm. may sometimes be awnless, the inadequacy of such keys is apparent. It is now to be expected that the vernal *A. hyemalis* (Walt.) BSP. (*A. antecedens* Bickn.) will be found to have awned colonies.

Agrostis perennans is here treated as the plant with the mostly short-pedicelled spikelets (many pedicels shorter than the spikelets) appressed-ascending. Var. *aestivalis* is the woodland plant (*A. Schweinitzii* Trin.) with more open panicle, the mostly divergent spikelets chiefly on longer pedicels (1-3 times as long as spikelets).

ARISTIDA LONGESPICA Poir., var. **geniculata** (Raf.), comb. nov. *A. geniculata* Raf. Am. Mo. Mag. ii. 119 (December, 1817).

In his *North American Species of Aristida*,¹ Hitchcock rightly took up for *A. gracilis* Ell. Bot. S. C. and Ga. i. 142, t. 8, fig. 3 (1816) the earlier name, *A. longespica* Poir. in Lam. Encycl. Suppl. i. 452 (1810). Hitchcock then stated that the type of *A. longespica* "could not be found . . . but the description . . . can apply only to what has commonly been called *A. gracilis* Ell." Later, however, Henrard, in his very exhaustive studies of *Aristida*, illustrated the fruiting spikelet "*From type specimen*": "I had at my disposal a few spikelets of the type. They were found, accurately packed up in an envelope, in Balansa's Herbarium."² Henrard's figure from the type of *A. longespica* shows the lemma (up to the forking of the awns) 5 mm. long, the divergent middle awn 8.6 mm. long, and the lateral awns 3 mm. long. This figure from the type well accords with Poiret's original diagnosis and his fuller description: "aristis valde inaequalibus" and "la valve de la corolle fort étroite, subulée, terminée par trois arêtes; celle du milieu divergente, une fois plus longue que la corolle; les deux autres beaucoup plus petites."

Elliott's figure of his *A. gracilis* (as *Gracilis*) was very carelessly drawn, the sketch of the inflorescence showing most of the awns as in the Poiret type of *A. longespica*, but the three lowest spikelets with lateral awns subequal, the enlarged detail showing them subequal and the central one (even when enlarged) shorter than in the life-size habit-drawing! Elliott's diagnosis, however, shows that he was describing the same species as Poiret's: "aristis lateralibus brevibus, erectis, intermedia longiore, patente."

¹ Hitchc. Contrib. U. S. Nat. Herb. xxii. 538 (1924).

² Henrard, Crit. Revis. Gen. *Aristida*, i. 304, 305 (1926).

Asa Gray, familiar with the common northern plant (“coast of Mass. and from Illinois southward”) with “*lateral awns varying from one third to fully half the length of the horizontally bent middle one* . . . —Middle awn 6''–9'' [1.6–1.9 cm.] long” and considering that to be true *A. gracilis*, described the shorter-awned plant of Elliott (and of Poiret before him) as *A. gracilis* var. *depauperata*, with the lateral awns “one fifth to one third its [middle awn’s] length . . . on micaceous hills near Philadelphia.”—Gray, Man. ed. 5: 618 (1867).

In the Gray Herbarium and in the large series in the Herbarium of the New England Botanical Club I find no characteristic short-awned *Aristida longespica* (*A. gracilis* Ell., *A. gracilis*, var. *depauperata* Gray) from north of southeastern Pennsylvania. In the interior it extends north to Ohio and southern Michigan. In this extreme, typical southern *A. longespica*, the central awn varies from 5 to 13 mm. long, the lateral being 1/5–1/3 as long (1–4 mm.).

In the plant of New England, southern New York and New Jersey, as shown in these collections (this extreme extending somewhat generally in the interior from the Gulf of Mexico north to northern Ohio and northern Indiana), the plant is that which Asa Gray considered to be characteristic *A. gracilis*: with the central awn 1–2.1 cm. long, the lateral 2/5–4/5 as long (4–15 mm.). This longer-awned extreme being the general one in New England and southern New York, while the typical short-awned plant is rare or unknown north of southeastern Pennsylvania, it is clear that the segregation made in 1867 by Gray was well founded, although he had the typification confused.

That the longer-awned extreme is the plant well described by Rafinesque there can be hardly any question. His characterization was clear and the localities indicate clearly the long-awned northern plant:

14. *Aristida geniculata*. Chaff slender, upright, round, base geniculated, leaves filiform, convolute striated rough backwards, ligules ciliated; panicle racemose, contracted elongated, glumes equal, keel and bristle rough, pedicel of the glumelles hairy, glumelles smooth convolute, bristle longer twisted rough, divisions very long, nearly equal.—Obs. Very common on the Hempstead plains, and on the sea-shore near Oyster Bay, Gravesend, &c. on Long-Island. Annual: next to *A. Stricta* of Micha[u]x, many stems often grow together, they rise about one foot. It blossoms in August and September.